



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Patent Application of   | ) | <b>MAIL STOP Appeal Brief - Patents</b> |
| Vernon T. Brady et al.        | ) |   |
| Application No.: 09/975,995   | ) | Group Art Unit: 2615                    |
| Filed: October 15, 2001       | ) | Examiner: Briney III, Walter F          |
| For: METHOD AND APPARATUS FOR | ) | Confirmation No.: 9493                  |
| HIGH FREQUENCY WIRELESS       | ) |   |
| COMMUNICATION                 | ) |   |
|                               | ) |   |
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|                               | ) |   |

REPLY BRIEF

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Reply Brief is in response to the Examiner's Answer dated July 25, 2008, and in addition to the arguments presented in the previously filed Appeal Brief. On page 11 of the Examiner's Answer, the Examiner asserts "Although *Dent* suggests that a single polarization may both transmit and receive, this fact does not alter the ability of the *Dent* invention to perform the same function as the claimed means." Appellants respectfully disagree with the Examiner's ultimate conclusion.

The Examiner appears to reach baseless conclusions based on speculation. For example, Appellants have claimed information transmission using a first polarization and information reception using a second polarization to thereby isolate information transmission from information reception in full duplex communication, as variously recited in independent claims 1, 19 and 29. The Examiner has failed to establish a prima facie case of obviousness in rejecting the appealed claims.

On page 11 of the Examiner's Answer, the Examiner appears to erroneously assert that the *Dent* patent "suggests that a single polarization may both transmit

and receive"; and based on this erroneous assertion, the Examiner then impermissibly reaches by pure speculation that "this fact does not alter the ability of the *Dent* invention to perform the same function as the claimed means." Appellants respectfully submit that the Examiner has chosen to reach this and other conclusions that are baseless under any of the pre- or post-KSR obviousness criteria.

The Dent patent does not suggest that a single polarization may both transmit and receive. Rather, as relied upon by the Examiner on page 4 of the Examiner's Answer, what the Dent patent actually discloses is a mere dual-circular polarized horn antenna 1009, which can "launch a Right Hand circularly polarized signal into the horn antenna 1009...and simultaneously a Left Hand Circularly polarized signal corresponding to the signal from TWTA 1007" (col. 12, lines 22-31). What is disclosed is a dual-circular polarized horn antenna 1009 capable of "launching" or transmitting these Right and Left Hand signals.

Likewise, another passage of the Dent patent recites, "At the hubstation, the composite signal is received by a dual circularly polarized antenna and the two polarizations are split into two respective banks of FM receivers" (col. 12, lines 32-34). Here, the dual circularly polarized antenna functions as a receiving antenna for splitting "into two respective banks of FM receivers." Accordingly, 1) there is no credible support for the Examiner's assertion of a single polarization that may both transmit and receive in the prior art, and 2) there is no basis whatsoever for the Examiner's ultimate conclusion that information transmission using a first polarization and information reception using a second polarization to thereby isolate information transmission from information reception in full duplex communication, as variously recited in independent claims 1, 19 and 29, is somehow obvious.

Assuming, arguendo, that somehow one of ordinary skill could have configured the "dual-circular polarized horn antenna 1009" or the "dual circularly polarized antenna" disclosed in the Dent patent to fit the Examiner's suggestion of "a single polarization that may both transmit and receive"; Appellants respectfully ask the Board, how could one of ordinary skill have made such a leap "to thereby isolate information transmission from information reception in full duplex communication," as Appellants have clearly delineated in independent claims 1, 19 and 29?

The Examiner appears to ignore that the simultaneous 1) information transmission using a first polarization and 2) information reception using a second polarization, in "full duplex communication," would not have been an ordinary task to one of ordinary skill, because the information reception is ordinarily not carried out in the same confined spectrum in the presence of a simultaneous information transmission in "full duplex." For example, one of ordinary skill would have been daunted by the fact that there is a marked disparity in signal strength between the "information reception," which is comparatively attenuated, and the "information transmission". To make such a leap as to conclude that simultaneous transmission as asserted by the Examiner is somehow the same, ordinary, or obvious in any sense of the pre- or post-KSR obviousness criteria, as the Appellants' claimed information transmission using a first polarization and information reception using a second polarization to thereby isolate information transmission from information reception in full duplex communication, as variously recited in independent claims 1, 19 and 29, would be in direct contravention of known scientific principles; and thereby finds no basis in the legal principles as clearly set forth under any of the pre- or post-KSR obviousness criteria. Appellants respectfully submit that based upon

the information relied upon by the Examiner, one of ordinary skill could not possibly have reached the Examiner's baseless conclusion of obviousness.

At least for these reasons, in addition to the detailed arguments as set forth in the Appeal Brief, Appellants respectfully submit that the only way for the Examiner to have reached his ultimate conclusion is by overreaching by hindsight speculation without a credible support; thereby the Examiner's conclusions of obviousness are clearly baseless.

Appellants respectfully submit that the Examiner has failed to establish a prima facie case of obviousness in rejecting the appealed claims. Reversal of the rejections is submitted to be in order.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: September 9, 2008

By: 

Patrick C. Keane

Registration No. 32858

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620